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SUMMARY IN ENGLISH

**Features of colonies and breeding sites affect reproductive success of sand martin
*Riparia riparia***

Sand martin *Riparia riparia* is one of the few colonial nesting birds from passerine species (Passeriformes). It nests in colonies of several to several thousand pairs. Birds independently dig nest burrows consisting of a tunnel ended with a chamber with nest. The real benefits and costs of colonial breeding are not fully understood. There is a few information in the literature on the breeding of sand martin from Poland.

The aim of this study was to investigate elements of breeding biology and ecology of sand martin and to determine how colony features and breeding sites affect on reproductive success. The analysis of breeding success includes i.a. factors such as colony size, position and density of nests in the colony, depth of nest burrows, date of first egg laying and brood synchronization. In addition, the causes of brood losses, the brood stage at which the loss occurred have been established and the sand martin nest predators were identified.

The studies were carried out in 2017-2018 in 32 breeding colonies of sand martin with a total of 2,426 nests, located in the valleys of the San and Wiar rivers and in the bank of a closed brickyard.

The obtained results showed that reproductive success depends i.a, on the size of the colony, the location of the nest and the depth of the nest burrow. The overall breeding success was 69.19% in 2017 and 72.72% in 2018. Predation was the most common cause of brood loss, at the stage of large chicks in 2017 and eggs in 2018. Hatching success was 77.26%, in 2017 and 82.92% in 2018, respectively. A decrease in the clutch size was found during breeding season. The clutch size in 2017 was 4.70 and 4.78 in 2018. The average number of nestlings after hatching was 3.63 in 2017 and 3.96 in 2018, and the average number of fledglings was 3.06 and 3.47, respectively.

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